Claim Amendments

1 (currently amended) An article of manufacture for ~~the prevention of the increase of temperature in~~ heat ~~sensitive devices through the~~ absorption ~~of heat during heat generating conditions~~ comprising:

bicarbonate salt in an amount ~~sufficient~~ to effect sufficient ~~the required~~ heat absorption to protect a heat sensitive device from a damaging thermal load; and

means for supporting said bicarbonate salt, ~~the physical characteristics of said means for supporting said sodium bicarbonate being defined by the heat absorbing application~~said bicarbonate salt being supportable in relation to said heat sensitive device by said support means;

wherein said bicarbonate salt effects said heat absorption at least in part based on an irreversible decomposition of said bicarbonate salt.

2 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is selected from the group consisting of Lithium Bicarbonate, Sodium Bicarbonate, Potassium Bicarbonate, Magnesium Bicarbonate, Calcium Bicarbonate, Beryllium Bicarbonate, Aluminum Bicarbonate, Ammonium Bicarbonate and the mixtures thereof.

3 (currently amended). The article of manufacture according to Claim 1, wherein the means for supporting said bicarbonate salt ~~further~~ comprises a retaining matrix, packaging, encapsulation, microencapsulation, enclosure or structure ~~to form a heat absorbing surface, device or structure~~.

4 (currently amended). The article of manufacture according to Claim 1, wherein ~~the~~ a heat sensitive device is embedded within the bicarbonate salt.

5 (currently amended). The article of manufacture according to Claim 1, wherein ~~the heat sensitive device is surrounded by~~ the bicarbonate salt is surrounded by a heat sensitive device.

6 (original). The article of manufacture according to Claim 1, wherein the means for supporting said bicarbonate salt is a closed container, within which said bicarbonate salt is located.

7 (currently amended). The article of manufacture according to Claim 6, wherein said bicarbonate salt lines ~~the~~ an inner wall of the closed container.

8 (currently amended). The article of manufacture according to Claim [[7]] 5, wherein said heat sensitive device is located within and spaced from said bicarbonate salt.

9 (currently amended). The article of manufacture according to Claim 1, wherein said bicarbonate salt is adhered to a flexible substrate, said flexible substrate being adaptable to the size and shape of said heat sensitive device in thermal communication with said organic acid salt.

10 (canceled).

11 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Lithium Bicarbonate.

12 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Sodium Bicarbonate.

13 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Potassium Bicarbonate.

14 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Magnesium Bicarbonate.

15 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Calcium Bicarbonate.

16 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Beryllium Bicarbonate.

17 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Aluminum Bicarbonate.

18 (previously presented). The article of manufacture according to Claim 1, wherein the bicarbonate salt is Ammonium Bicarbonate.

19 (new). The article of manufacture according to claim 1, further comprising at least one layer of insulation placed between said heat sensitive device and said support means.

20 (new). The article of manufacture according to claim 1, further comprising at least one layer of insulation placed between said support means and a source of heat.

21 (new). The article of manufacture according to claim 1, further comprising a hermetic seal surrounding said support means.

22 (new). The article of manufacture according to claim 21, wherein said hermetic seal includes a vent.

23 (new). An article of manufacture for heat absorption, comprising:

bicarbonate salt in an amount to effect sufficient heat absorption to protect a heat sensitive device from a damaging thermal load, said bicarbonate salt being formed into an endothermic structure that is effective to absorb said heat at least in part based on an irreversible decomposition of said bicarbonate salt.

24 (new). The article of manufacture according to Claim 23, wherein the bicarbonate salt is selected from the group consisting of Lithium Bicarbonate, Sodium Bicarbonate, Potassium Bicarbonate, Magnesium Bicarbonate, Calcium Bicarbonate, Beryllium Bicarbonate, Aluminum Bicarbonate, Ammonium Bicarbonate and the mixtures thereof.

25 (new). In combination:

(a) a heat absorbing control device that includes a bicarbonate salt in an amount to effect sufficient heat absorption to protect a heat sensitive device from a damaging thermal load; and

(b) a heat sensitive device in thermal communication with said heat absorbing control device;

wherein said bicarbonate salt is supported in relation to said heat sensitive device, and wherein said bicarbonate salt effects said heat absorption at least in part based on an irreversible decomposition of said bicarbonate salt.

26 (new). A combination according to claim 25, wherein said heat sensitive device is selected from the group consisting of a flight recorder, a metal structure, a plastic structure, an electronic device, an oven sensor, a missile skin, an exhaust pipe, a race car

component, a fire wall, a nuclear reactor component, a gun, a munitions box, a battery and body protective structure.

27 (new). A combination according to claim 25, wherein said heat absorbing control device includes a support means for supporting said bicarbonate salt in relation to said heat sensitive device.